20050509.ba v03_n804.bam.20050509

>From ???@??? Mon May 9 16:31:37 2005 -0500
Date: Mon, 9 May 2005 16:31:04 CDT
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 3804
Message-Id: <20050509213105.57CB84017E@srvr1.theporch.com>

BOATANCHORS Digest 3804

Topics covered in this issue include:

1) Comment On Most Common Octal Tubes
   by Liles and Naomi Garcia <landn@easystreet.com>
2) Re: MOST COMMON OCTAL TUBES
   by "Arden Allen" <gumbear@pacbell.net>
3) Re: MOST COMMON OCTAL TUBES
   by stuck in 50s <polepeeg@ba-watch.org>
4) Re: MOST COMMON OCTAL TUBES
   by "Brian Clarke" <brianclarke01@optusnet.com.au>
5) Collins Tuner
   by "b. smith" <smithab11@comcast.net>
6) Looking for a nice TBY
   by "John K9UWA" <k9uwa@arrl.net>
7) NC-190 Comment
   by "David Thompson" <thompson@mindspring.com>
8) Re: NC-190 Comment
   by "Hue Miller" <kargo_cult@msn.com>
9) Re: MOST COMMON OCTAL TUBES
   by stuck in 50s <polepeeg@ba-watch.org>
10) Re: Looking for a nice TBY
   by stuck in 50s <polepeeg@ba-watch.org>
11) Call Book Listing
   by "b. smith" <smithab11@comcast.net>
12) Re: Call Book Listing
   by Garey Barrell <k4oah@mindspring.com>
13) ADMINISTRIVIA: No More Reposts
   by listown@nanniandjack.com (Mail List Owner)
14) URM-25D component substitution
   by Ben Hall <kd5byb@bellsouth.net>
15) URM-25D component substitution
   by Ben Hall <kd5byb@bellsouth.net>
16) Re: URM-25D component substitution
   by Brian K Harris <brian.k.harris@philips.com>
17) "SHOTGUN" MICS
   by JOHN.SEHRING@ecunet.org
18) OCTAL TUBE KEEPERS

by JOHN.SEHRING@ecunet.org
19) History of tetrodes and beam tubes
by "Tom Rauch" <w8ji@contesting.com>
20) Re: URM-25D component substitution
by Ben Hall <kd5byb@bellsouth.net>

Message-ID: <427B2B98.7080302@easystreet.com>
Date: Fri, 06 May 2005 01:32:24 -0700
From: Liles and Naomi Garcia <landn@easystreet.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Comment On Most Common Octal Tubes
Content-Type: text/plain; charset=us-ascii; format=flowed
Content-Transfer-Encoding: 7bit

Good evening John and Everybody,

John, won't you be needing some 6SS7's for the RF's and IF's in your Hammarlund HQ-129-X receivers??

I just thought that I would ask.

Everybody have a great weekend!!

Regards from Aloha, Oregon,
Liles Garcia
landn@easystreet.com

Message-ID: <004501c55218$e73b67d0$63e47443@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: "Old Tube Radios" <boatanchors@theporch.com>
Subject: Re: MOST COMMON OCTAL TUBES
Date: Fri, 6 May 2005 01:52:02 -0700
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

> ....6K6 - this is a lower power and higher distortion version of the 6V6.
I'ld be inclined to keep it for replacement purposes, only. ....

A minor correction, if you will, Brian: The 6K6 is a power pentode, not a beam plate tetrode (or pentode if you like), as the 6V6 and it's bigger pal, the 6L6 is. True, the 6V6 produces less distortion for the same power output (as I have measured) but the difference is only a subject for audiophoolists IMO.

Arden Allen
KB6NAX

Date: Fri, 6 May 2005 07:36:31 -0400 (EDT)
From: stuck in 50s <polepeeg@ba-watch.org>
Message-Id: <200505061136.j46BaVDb015306@fracas.netboobie.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: MOST COMMON OCTAL TUBES

> Are you planning to include any European ones - such as the kinkless
> tetrodes of M-OV [KT-66, -77, -88],

Ya know those were aligned grid things that were dead-man design copies
of the RCA 'beam power' series. But don't think it ever wound up in court

----
Message-ID: <01c901c55241$805604c0$0404a8c0@brian>
From: "Brian Clarke" <brianclarke01@optusnet.com.au>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: MOST COMMON OCTAL TUBES
Date: Fri, 6 May 2005 23:42:50 +1000
MIME-Version: 1.0
Content-Type: multipart/alternative;
     boundary="----=_NextPart_000_01C6_01C55295.50EDE5A0"

This is a multi-part message in MIME format.

------=_NextPart_000_01C6_01C55295.50EDE5A0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

Now, isn't that interesting? I heard it was the other way around - that =
a couple of=20
British engineers designed the kinkless tetrodes and offered them to the =
Americans.=20
But, as Sarnoff was into ripping off everyone he could, including Edwin =
Armstrong,=20
he paid nothing and pinched the designs anyway.

Isn't it strange how history gets revised?

73 de Brian, VK2GCE
------=_NextPart_000_01C6_01C55295.50EDE5A0
Content-Type: text/plain; charset=us-ascii

Content-Transfer-Encoding: 7bit

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*         ---REMAINDER OF MESSAGE TRUNCATED---             *
*     This post contains a forbidden message format        *
*  (such as an attached file, a v-card, HTML formatting)  *
*    Mail Lists at theporch.com only accept PLAIN TEXT     *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting  *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

------=_NextPart_000_01C6_01C55295.50EDE5A0--

Message-ID: <001101c5524e$1744f8d0$94f02144@Denroom>
From: "b. smith" <smithab11@comcast.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Collins Tuner
Date: Fri, 6 May 2005 11:12:56 -0400
MIME-Version: 1.0
Content-Type: text/plain;
    format=flowed;
    charset="iso-8859-1";
    reply-type=original
Content-Transfer-Encoding: 7bit

I am still looking for the Collins Antenna Tuner ("Antenna Matching Network"
18K-3). This was used on the 10 channel crystal control HF set the Collins
18S-4 AKA
ARC-59.
A lot of these tuners have been torn up for parts.
Pictures of the tuner are at:

http://solo11.abac.com/zorroab1/Collins%2018S-4/pg2.html

thanks

breck k4che

From: "John K9UWA" <k9uwa@arrl.net>
To: Old Tube Radios <boatanchors@theporch.com>
Date: Fri, 06 May 2005 12:23:49 -0500
MIME-Version: 1.0
Subject: Looking for a nice TBY
Message-ID: <427B61D5.28247.D86EAF4@ORCPT>
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT

Content-description: Mail message body

I have a customer that is looking for a restored.... operational... TBY if anyone has one that they want to move along... send us an email...

thanks
John k9uwa
John Goller, K9UWA & Jean Goller, N9PXF
Antique Radio Restorations
k9uwa@arrl.net
Visit our Web Site at:
http://www.JohnJeanAntiqueRadio.com
4836 Ranch Road
Leo, IN 46765
USA
1-260-637-6426

Message-ID: <006a01c55372$98b8c430$a5649a04@yourxb2x7j77gn>
From: "David Thompson" <thompson@mindspring.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: NC-190 Comment
Date: Sat, 7 May 2005 22:06:48 -0400
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I recall the NC-190 was a somewhat unique design as instead of a General Coverage receiver you got bandspread for Short wave broadcast bands or by flipping the switch you got a ham band receiver. No trying to align the main dial with a mark and then hoping the ham bandspread was within 10 or 20 kcs.
The only problem is that national found hams wanted just the ham bands and more calibration at that!
This limited the sales of the RME 6900. It looked like the so called logging scale was in kcs but low and behold it was as advertised-a logging scale. I think RME/Electro Voice made a bad choice not adding a few more $$$ to the design and making it almost a direct readout as with the Drake 2 and 4 series.

73 Dave K4JRB

Message-ID: <BAY106-DAV6F23156433ABF12DD27C8E41D0@phx.gbl>
From: "Hue Miller" <kargo_cult@msn.com>
To: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: NC-190 Comment
Date: Sat, 7 May 2005 19:16:33 -0700
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

----- Original Message -----
From: "David Thompson" <thompson@mindspring.com>
To: "Old Tube Radios" <boatanchors@theporch.com>
Sent: Saturday, May 07, 2005 7:06 PM
Subject: NC-190 Comment

> I think RME/Electro Voice made a bad choice not adding a few more
> $$$ to the design and making it almost a direct readout as with the Drake 2
> and 4 series.
>
> 73 Dave K4JRB

Yes, BUT.... was not the RME a vfo-first oscillator, an older idea that
was rapidly being replaced by the more modern receiver circuit, with
an xtal-controlled first HFO and a fixed tuning range 1st IF defining
the dial action on EVERY band? Such as used by Drake and Collins.
It would have been VERY difficult for RME to have 1 kcs readout on
the dial with a variable first HFO.
-Hue Miller

Date: Sun, 8 May 2005 12:41:53 -0400 (EDT)
From: stuck in 50s <polepeeg@ba-watch.org>
Message-Id: <200505081641.j48GfrAD024642@fracas.netboobie.org>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: tubelore@jeffnet.org
Subject: Re: MOST COMMON OCTAL TUBES

Brian tnx for the new that spin on the KTs

If you go to an old text that has plate curves for 46 tetrodes,
you'll see just how pronounced the 46 kink is as you transition
from the sloped to horizontal part of the tube curve.

And ya know RCA never advertised 'beam power' as a KT fix. But a way to
make more power. Nonsense. And mountains of hams and engineers
fell for it for two generations.

And we think today's jungle of software misrepresentations the final stamp of moral decay.

As the French say, the more things change - the more they don't
See W4KH for translation

Another nail in the Sarnoff reputation coffin

Marty

] From: "Brian Clarke" <brianclarke01@optusnet.com.au>
] To: Old Tube Radios <boatanchors@theporch.com>
] Subject: Re: MOST COMMON OCTAL TUBES
] Date: Fri, 6 May 2005 23:42:50 +1000
] --
] X-Virus-Scanned: by amavisd-new 2.3.1-rc2 using ClamAV at theporch.com
] X-Bogosity: No, tests=bogofilter, spamicity=0.000000, version=0.16.4
]
] This is a multi-part message in MIME format.
]
] > Marty sed UK boosted 'beam power' calling it KT... & don't remember a
] > court case
]
] a couple of
] British engineers designed the kinkless tetrodes and offered them to the =
] But, as Sarnoff was into ripping off everyone he could, including Edwin =
] Armstrong,=20
] he paid nothing and pinched the designs anyway.
]
] Isn't it strange how history gets revised?
]
] 73 de Brian, VK2GCE

Date: Sun, 8 May 2005 12:44:24 -0400 (EDT)
From: stuck in 50s <polepeeg@ba-watch.org>
Message-Id: <200505081644.j48GiOEN024682@fracas.netboobie.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Looking for a nice TBY

sheesh, I @ 1st misunderstood & thot u were looking for a Catalina flying boat

---

Message-ID: <001b01c55499$05d2fcd0$94f02144@Denroom>
From: "b. smith" <smithab11@comcast.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Call Book Listing
Date: Mon, 9 May 2005 09:14:16 -0400
MIME-Version: 1.0

Content-Type: text/plain;
    format=flowed;
    charset="iso-8859-1";
    reply-type=original
Content-Transfer-Encoding: 7bit

John W4GQT and I are researching his call to see if he is the only holder of W4GQT.
I have looked in the 1951 call book and do not see the call listed.
John has held the call W4GQT since 1958 where he skipped the Novice license and entered
Amateur Radio direct as a General Class.
Can anyone on the list who has a call book search throught the mid 1950's and also look in earlier
1940's call books to see if it was listed.

Thanks

Breck k4che

Message-ID: <427F7653.6030205@mindspring.com>
Date: Mon, 09 May 2005 10:40:19 -0400
From: Garey Barrell <k4oah@mindspring.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Call Book Listing
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

Breck -

I'm sure you'll get an answer from someone with older callbooks, but I'd say that call was originally issued in the late 30's. Calls were issued pretty much "in order", with W4Zxx issued in the late 40's. The FCC then went back through the W calls again, picking up any that had expired before starting the K series calls.   I was issued KN4OAH in March of 1957. Your friend probably got his call after the "K4s" ran out in late 1958. The FCC then went back through the W4 and K4 calls once more before starting the WA4 series in early 1959.

73, Garey - K4OAH
Atlanta

Drake C-Line Service Manual
<http://hr99.home.mindspring.com/R-4C_Servicez/>

b. smith wrote:

> John W4GQT and I are researching his call to see if he is the only
> holder of W4GQT.
> I have looked in the 1951 call book and do not see the call listed.
> John has held the call W4GQT since 1958 where he skipped the Novice
> license and entered
> Amateur Radio direct as a General Class.
> Can anyone on the list who has a call book search throught the mid
> 1950's and also look in earlier
> 1940's call books to see if it was listed.
>
> Thanks
>
> Breck k4che
>

From: listown@nanniandjack.com (Mail List Owner)
To: Old Tube Radios <boatanchors@theporch.com>
Subject: ADMINISTRIVIA: No More Reposts
Date: Mon, 9 May 2005 11:15:01 -0700 (PDT)
Message-Id: <20050509181501.55A9A146ED@osr506.nanniandjack.com>

Gang-

This is a reminder that reposting of For Sale or Wanted items from other internet sources (lists and auctions) is discouraged.... nay prohibited on the BoatAnchors list.

If a BA list member wants to post the item elsewhere and on the BA list, that creates NO problem. What we are trying to avoid are "seen on EBay" or "prime rig on xxx list" type posts... Very few BA members limit their searching to just the BA list!

The problem comes when the poster in the other venue is not asked about the re-post... without the permission of the poster, problems are guaranteed, and I do not have the time, the energy, or the desire to address and deal with the headaches that re-posting causes... I'll grant you that folks in other venues need to be re-calibrated, but I do NOT want to referee! ;^)

So, henceforth, let's have NO re-posts from other sources referred to the list. Yes, I know this may sound pretty provincial, but those who really care have browsers and know where to look, and those who don't, probably don't....

I do NOT need the aggravation of someone who posts to a newsgroup and then has to fight off the hungry folks from the BA list who want to rearrange his viewpoint or calibrate his selling technique.

ENOUGH! Already... Just don't do it!
--
73
Jack, W4KH/Mobile - - - Mailing List Archiver/Owner - - -
listown@nanniandjack.com - "Plus ca change, plus c'est la meme chose"
"Il n'y a que les idiots qui ne changent jamais d'idee"
Mon May 9 11:15:00 PDT 2005

Message-ID: <427E1E4C.4010203@bellsouth.net>
Date: Sun, 08 May 2005 09:12:28 -0500
From: Ben Hall <kd5byb@bellsouth.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: URM-25D component substitution
Mime-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=ISO-8859-1; format=flowed

Good morning all,

I'm in the process of rebuilding an AN/URM-25D signal generator. It seems to have a pair of bad 1N198 germanium diodes per the troubleshooting steps in the manual.

Symptom - no indication on the % modulation meter, be it fed from the internal modulation generator or with an external source. I can hear the 400 Hz and 1000 Hz tones on a receiver and just finished overhauling the modulation chassis, so I know its working. Per the manual, it notes that CR101 and CR102, a pair of 1N198 germanium diodes should be replaced.

But, I don't have any 1N198's in the supply bins. Worse yet, I don't think anyone has made these in 20 years. :(Or maybe more. :(

The good news is that Mouser shows the 1N4148 as a suitable substitute. That bad news is that this perplexes me, as Germanium has a lower forward voltage drop compared to silicon. How can 1N4148 be a suitable substitute? I've got a 1N198 data sheet in front of me that says Vf at 4 mA is 1 volt, and the 1N4148 data sheet I've got says Vf at 10 mA is 1 volt, so maybe they are not too far off?

However, again the good news is that I believe I can substitute the 1N4148's and recalibrate the circuit for the increased voltage drop by fiddling with R169, which is the % modulation calibration control.

Thoughts and comments from those wiser than I? Am I on the right track here?

thanks and 73,
ben

--
No virus found in this outgoing message.
Checked by AVG Anti-Virus.
Version: 7.0.308 / Virus Database: 266.11.6 - Release Date: 5/6/2005

Message-ID: <427D798F.80209@bellsouth.net>
Date: Sat, 07 May 2005 21:29:35 -0500
From: Ben Hall <kd5byb@bellsouth.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: URM-25D component substitution
Mime-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=ISO-8859-1; format=flowed

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To: Old Tube Radios <boatanchors@theporch.com>
Cc: Old Tube Radios <boatanchors@theporch.com>,
     owner-boatanchors@theporch.com
Subject: Re: URM-25D component substitution
MIME-Version: 1.0
Message-ID: <OF04C328E1.6A950DA2-
ON88256FFC.0067EBE4-86256FFC.0068E144@philips.com>
From: Brian K Harris <brian.k.harris@philips.com>
Date: Mon, 9 May 2005 14:04:44 -0500
Content-Type: text/plain; charset="US-ASCII"

Ben,

While silicon diodes have historically had much greater Vf than their germanium counterparts, that is not necessarily true today. There are many new technology silicon diodes (our Megaschottky family, for example) that have much lower Vf than typical germanium. Please look at :

http://www.semiconductors.philips.com/cgi-bin/catalog/catalog.pl/mms/219/282/
^27046/30927/41752/index.html#41752

The PMEG1020 data sheet will show you what I mean. If you find a diode that you like, send an email to me and I'll get some samples for you.

Brian K. Harris, Account Manager, South Central Region

Philips Semiconductors
2140 Lake Park Boulevard, Suite 200
Richardson, Texas 75080 USA

Office: 972 705-2484
Mobile: 214-763-5977
Fax: 972-705-2450
Email: brian.k.harris@philips.com

Ben Hall
Sent by:
owner-boatanchors@theporch.com
2005-05-08 09:12 AM
Please respond to
kd5byb@bellsouth.net

To
Old Tube Radios <boatanchors@theporch.com>
cc

Subject
URM-25D component substitution
Classification

Good morning all,

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thanks and 73,
ben

--
No virus found in this outgoing message.
Checked by AVG Anti-Virus.
Version: 7.0.308 / Virus Database: 266.11.6 - Release Date: 5/6/2005

Date: Mon, 9 May 2005 15:18:48 -0400 (EDT)
Message-Id: <200505091918.j49JImpW320731@wine.ecunet.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: "SHOTGUN" MICS
From: JOHN.SEHRING@ecunet.org

To: boatanchors@theporch.com

Hi Folks,

BA question but off topic... I have 4@ Electro Voice #644 "Shotgun" mikes, (Hi/Lo Z, "Dynamic Cardiline", On-Off switch) complete with matching E-V plugs & some wire. They are in nice shape, taken out of use in a church, mounted up high so untouched by human hands. Old enuf I suppose to have been used with toob-type PA system (mandatory BA tie-in).

Can't imagine where they ought to wind up (not in my shack), you? Way too nice to toss. May reply off list if you think it too far off topic.

Thanx.

--John Sehring (Mon, May 9, 2005, 2:09 pm) Dell Rapids SD - WB0EQ

Date: Mon, 9 May 2005 15:18:40 -0400 (EDT)
Message-Id: <200505091918.j49JIeqv269959@wine.ecunet.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: OCTAL TUBE KEEPERS
From: JOHN.SEHRING@ecunet.org

To: boatanchors@theporch.com

Here's my modified list of *octal* tubes (I've lots of other kinds as well)
I should keep, aided by Brian's comments:

RF amp: 6SG7
Mixer: 6K8, 6SB7
IF amp: 6SG7, 6SQ7, 6SK7, 6SJ7
Detector: 6H6, 6SQ7 (2x diode & triode)
AF: 6J5, 6V6, 6K6, 6F6, 6SN7, 6N7
Rectifier: 5Y3, 5V4, 5Z3, 5AR4, 6X5

Other: 6AG7, 6SL7

Q: Was the 6SG7 the *only* RF amp commonly found in 30's & 40's in radios?
Those are the kinds of equipments I'd be most likely to have.

Any other additions, e.g. 12 volt tubes for ARC-5?

--John Sehring (Mon, May 9, 2005, 8:25 am) Dell Rapids SD - WB0EQ

Message-ID: <00e001c554d9$bd3c28c0$6401a8c0@akorn.net>
From: "Tom Rauch" <w8ji@contesting.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: History of tetrodes and beam tubes
Date: Mon, 9 May 2005 16:57:40 -0400
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Is there any comprehensive and (most important) accurate site on the mis-information highway or easy to find articles about the evolution of beam power tubes and pentodes?

Specifically the 6L6, 6V6, and 6AG7 and what gene pool each came from.

I got in a little discussion with my elderly uncle about tubes. I'm not sure what he was saying but we sure have fun arguing about nonsense, and I want to continue having fun.

73 Tom

Message-ID: <427FD67B.6080807@bellsouth.net>
Date: Mon, 09 May 2005 16:30:35 -0500
From: Ben Hall <kd5byb@bellsouth.net>
To: Old Tube Radios <boatanchors@theporch.com>
CC: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: URM-25D component substitution
Mime-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=ISO-8859-1; format=flowed

Good afternoon all,

Well, I decided that since I have 1N4148's handy, I'd install a pair and would see what happened.

The good news is that the meter now works! The bad news is that even with the adjustment pot set to its lowest setting, the meter readout is lower than the actual modulation. :(

Per the URM-25D manual, the modulation metering works as follows: "The circuit consists of a bridge-type rectifier producing a current through M101 proportional to the audio voltage output of the CATHODE FOLLOWER STAGE. The voltage is capacity coupled to two crystal diodes, type 1N198 (CR101-1, CR102-1), which are used in conjunction with bridge resistors (R170 and R171) to rectify the modulation."

So, I experimented with the bridge resistors. Changing out R170 and R171 (15k ohms each) for 2.2k ohms each gave me enough meter output that I was able to calibrate the meter. So all is well again with this URM-25D and I'm proceeding with my rebuild of the components inside the cast-aluminum chassis. For what it is worth, both the 30% and 50% calibration points are very close to what is indicated on my scope.

thanks and 73,
ben

Ben Hall wrote:
> Good morning all,
>
> I'm in the process of rebuilding an AN/URM-25D signal generator. It
> seems to have a pair of bad 1N198 germanium diodes per the
> troubleshooting steps in the manual.
>
> Symptom - no indication on the % modulation meter, be it fed from the

> internal modulation generator or with an external source. I can hear
> the 400 Hz and 1000 Hz tones on a receiver and just finished overhauling
> the modulation chassis, so I know its working. Per the manual, it notes
> that CR101 and CR102, a pair of 1N198 germanium diodes should be replaced.
>
> But, I don't have any 1N198's in the supply bins. Worse yet, I don't
> think anyone has made these in 20 years. :(Or maybe more. :(
>
> The good news is that Mouser shows the 1N4148 as a suitable substitute.
> That bad news is that this perplexes me, as Germanium has a lower
> forward voltage drop compared to silicon. How can 1N4148 be a suitable
> substitute? I've got a 1N198 data sheet in front of me that says Vf at
> 4 mA is 1 volt, and the 1N4148 data sheet I've got says Vf at 10 mA is 1
> volt, so maybe they are not too far off?
>
> However, again the good news is that I believe I can substitute the
> 1N4148's and recalibrate the circuit for the increased voltage drop by
> fiddling with R169, which is the % modulation calibration control.
>
> Thoughts and comments from those wiser than I? Am I on the right track
> here?
>
> thanks and 73,
> ben
>
>
>

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